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AGRICULTURAL ECONOMICS, 1950-2000

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ABSTRACT

In the past 25 years, agricultural economists have made significant progress in research but they have also experienced substantial inner turmoil and great anxiety about the profession—its direction and substance. Self-criticism has taken two major forms. Some people have argued that a larger share of staff time and funds should have been devoted to problems of the majority of the rural population. Others have contended that the research completed on such problems could have been done better.

The practical problems of agriculture and rural Americans will be changing in the future at an accelerating rate. To help agricultural economists and others keep up, midcareer opportunities and experiences in which people learn new skills to prepare for different activities must become more common. Future research techniques will also emphasize multifield and multidisciplinary work more. Increasingly, analyses will incorporate multiple-objective concepts, such as those recently used in water resource planning. Issues of conflict among rural people—in use of land, for one—will become more important.

To further complicate the work, equity considerations will increasingly favor rural and urban groups over commercial farmers. Questions on commercial agriculture must not be ignored, though, when doing research on communities with natural resources and on rural people. Similarly, questions on the equity of certain conditions or actions, for example, must be raised in research on commercial agriculture.

Agricultural economic research of the next 25 years will carry a strong streak of practicality. The profession particularly needs to focus on major national issues that private and public decision-makers cannot avoid. Agricultural economists must also avoid the false dichotomy of skills used in economic work related to U.S. problems and skills used to work on problems of other countries or on concerns that are international.

Keywords: Agricultural economics research, multidisciplinary, multiple objectives.

AGRICULTURAL ECONOMICS 1950-2000

by

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In the past 25 years, agricultural economists have experienced substantial inner turmoil and great anxiety about their profession—its direction and substance. But they have also made significant progress. These years have also been a period of much introspection raising the question: “What are the fundamental purposes of our profession?” At the same time, the practical problems of rural America important to the profession have changed rapidly. This rate will likely quicken in the future. Increasingly, agricultural economists and institutions in which they work will be challenged to “keep up” and to adjust.

How well agricultural economists respond and serve society will depend greatly on their ability to perceive and to anticipate the important issues for research. It will also depend on their flexibility in the face of such continual, increasing change in the problems of rural America. Last, effective response and service to society by agricultural economists hinge on how easily the relevant institutions, the discipline, and fund allocations can be shifted as the problems of rural America shift.

THE PAST 25 YEARS

Recall the setting of the early 1950's. The United Nations had been born as a hope for world peace. American food had become an instrument of international diplomacy and reconstruction. Total net income of farm operators reached nearly \$18 billion in 1948 only to drop to \$13 billion the next year. Hostilities broke out in Korea in 1950. Materials became scarce and prices shot up. Reflecting the concern for increased food production, the U.S. Department of Agriculture's Production and Marketing Administration published *The Fifth Plate* (15)². And the Department's Bureau of Agricultural Economics (BAE) released a study “Agriculture's Capacity to Produce: Possibilities Under Specified Conditions” (14).

¹ *Deputy Administrator, Economic Research Service, U.S. Department of Agriculture. This publication is based largely on a presentation made at the annual meeting of the Southern Agricultural Economics Association, New Orleans, Louisiana, February 3, 1975. It is the result of the author's continual exchange with colleagues in the Economic Research Service, other agencies of the Department of Agriculture, and persons throughout the profession.*

² *Italicized numbers in parentheses refer to terms in literature cited at the end of this paper.*

U.S. war babies growing up began to crowd the schools. Many Americans moved into suburbs while farm people started a mass exodus from the farms. "Vertical integration" and "agribusiness" became terms discussed in many professional meetings and on main streets of rural America.

These years also saw conflict between the U.S. Department of Agriculture's Bureau of Agricultural Economics (BAE) and its critics. Many factors contributed to the conflict and BAE's dissolution in 1953. The BAE had reorganized in 1939 to do planning, as well as gather statistics, carry out economic research, and provide program analysis helpful to others making planning decisions. This approach harmonized with BAE Chief Howard Tolley's sense of the needs of the Department and with the views of a chief of the BAE during the mid-1930's, Albert G. Black. Black felt that Government economists should contribute directly to agricultural programs and policy. They must not be content, he suggested, to make the correct analysis of a problem and propose a solution: "An economist who makes the correct analysis and cannot sell it convincingly has done only half the job and should be fired for not completing the job." (1, p. 14). At least one farm organization feared that the Bureau would become a rival representative of the farmer. Finally, controversy existed over whether the Bureau should have conducted and published a study about low-income people in Coahoma County, Mississippi (1, pp. 19-28).

Despite the turmoil and frustrations that the Bureau's dissolution in 1953 caused the profession, the 1950's brought increased appropriations for economic research, especially for studies on marketing and for economic and statistical analysis. Studies emphasized increased efficiency of marketing and, later, expanded demand through market development. The increased support permitted the building of departments of agricultural economics throughout the country and contributed significantly to the profession's success in quantifying important demand relationships of our economy and in developing production economics. It was during this period also that the pioneering work of the 1930's on benefit-cost analysis expanded greatly.

Also in the 1950's, the profession, especially in the universities, was engaging heavily in research and extension related to farm production questions. This work effectively contributed to public dialog and to eventual decisions on farm policy related to price-depressing farm surpluses.

The works of Brandow, Cochrane, Fox, Heady, Gale Johnson, Glen Johnson, Sherman Johnson, Maddox, Nerlove, Paarlberg, Ragan, Timmons, Schultz, and Weintraup are but a few of the outstanding contributions to the progress of the profession during this period.

Social-related research remained suspect, however, and research focusing on levels of living of low-income people received criticism. Such research was restricted in the Department, and our colleagues

in universities appear to have followed USDA's example. The conditions of braceros, migrant workers, and other disadvantaged groups were largely ignored by the profession.

The interests of the 1950's continued into the 1960's. Agricultural economists focused on commodity surpluses, price stability, the continued decline in farm numbers, and the economics of production by the firm. They also did significant work in estimating supply and in developing models to effectively consider direct and indirect effects of changes in demand, supply, and related policies.

Like much of the rest of society during the 1960's, agricultural economists remained largely oblivious to important economic relationships that are more generally accepted today. We largely neglected, for instance, the potential effects of international trade on farm income and consumer prices and the effects of racial discrimination on some farmers and farmworkers. Agricultural economists also did not realize, or chose largely to ignore, that technology had pervasive effects on income distribution and that farm technology influenced the magnitude and characteristics of the country's urban problems.

As Bawden, Bishop, and others commented in later years, the shift toward research on the economics of "inequality" developed slowly (2), (3). Yet inequality affected rural people and sometimes significant numbers of farmers. Within the larger society, however, inequality of economic opportunity was becoming a major social issue.

Rural development as a subject area received a boost in the Economic Research Service when the Economic Development Division (EDD) was set up in 1965. However, a significant part of EDD's budget came from the Office of Equal Opportunity transfer funds. These disappeared later, and the related work was cut back (7, pp. 31-35).

YEARS OF INTROSPECTION

Partially accountable for agricultural economists' anxiety in past years is, I believe, the fact that they have, in their work, been strongly concerned about equity despite their slowness in adjusting to the social issues of the 1950's and 1960's. Research on fair returns to agricultural resources is an example. Yet, as economic returns to agriculture increased, it became obvious that programs we, as a profession, devised and endorsed were enriching the more prosperous farmers and not the ones who needed help the most. Did such work, then, truly contribute to equity for farmers? Agricultural economists' concern mounted as large-scale farmers and agribusiness seemingly asserted their independence from the services of the profession. The assumptions underlying its continued existence, the "theology," if you will, that farmers needed such analysis and outlook, began to fade (9).

But it was not simply the wishes of individual agricultural economists that brought about the "mix" of work in the profession. The

search for a role that was concerned with rural people and their communities suffered too because little money was provided for social and economic research on low-income people. After 1965, for example, mounting costs of the Vietnam war curtailed support for programs to upgrade rural environment, provide for rural development, and overcome rural poverty (1, p. 35).

Self-criticism appears to have taken two forms, as detailed in the literature. Papers by Hathaway (10), Bishop (3), and Bawden (2) argued that a larger share of staff time and funds should have been devoted to economic problems of the majority of the rural population. Other agricultural economists contended that what we did could have been done better. Brinegar, Bachman, and Southworth suggested that agricultural economists did not effectively evaluate the role of U.S. agriculture in the world economy or the goals of farm policy (6). Bonnen said we were doing too much applied work (4). Efforts were fragmented, according to Mueller (13). And Bressler argued that overly ample descriptive work lacked rigorous analysis, while pieces of work important to complex problems had not been additive (5).

Researchers and administrators in academe, Government, and industry have continued to question our productivity and effectiveness—in light of recent adjustments in farm prices and changes in domestic agriculture and international trade. Further, they say agricultural economists lack truly national and international models of the entire food and fiber system and its interrelationships with the rest of the economy (8). Recently, too, the entire agricultural establishment has come under attack from Hightower and others for not only overlooking the rural poor but for also lacking sufficient interest in urban America (11).

Certainly, many of these past economic developments and criticisms are continuing ones. Two years ago, Bawden said that the 1960's had been the "Decade of Awakening," and that the next 10 years would be decisive for the work of the agricultural economics profession (2). Several shocks have added to the awakening he observed. They include energy costs, unemployment in rural and urban America, roller coaster type changes in farm prices, large increases in U.S. and foreign agricultural and related trade, and continuing starvation of people in faraway countries brought close to us through television.

THE NEXT 25 YEARS

Turmoil and change, implicit to this period of introspection, have caused anxiety. For organizations or individuals, it is not exactly comfortable to ask:

- How useful is the data base that has been serving us for 30 years?

- Was our research done so that others can do theirs in a manner that builds on to previous work?
- What are the distribution effects of our work? Is it useful in more than one way or area? Would other work contribute more to society?

Answers come hard. Changes in approach and decisions to reallocate are some of the toughest around—whether they relate to one's personal lifestyle or the national economy. Such decisions are hard for organizations too; perhaps more so.

The present condition of the economy with its many crises challenges us to make these decisions. Recall that in the original Greek, "krisis" means decision. And as Ralph Waldo Emerson reminds us: "This time like all times is a very good one if we but know what to do with it" (7).

What we agricultural economists do next year and the next are important, especially since the practical problems of rural America will continue to change at an accelerating rate. Decisions must build in flexibility and adaptability so that adjustments in research can be accomplished with relative ease as the practical problems change.³ Otherwise, we agricultural economists will be found wanting. We will either not know what to do or we will know what to do but be unable to do it simply because of organizational arrangements or a failure to prepare for new and different problems. At the same time there will be need to avoid constant organizational changes.

Other changes, both national and international, affect our work. The U.S. economy interrelates closely now with international markets for agricultural products. Farm product stock levels are low. Energy costs have jumped abruptly. Similarly, the international and domestic policy framework for agriculture is shifting rapidly. All these events suggest that instability will remain a prominent concern. This has serious implications for what work agricultural economists do and how it is done.

For example, estimates by the Economic Research Service (ERS) of supply and demand elasticities have been found frequently not to be appropriate to present conditions. This is not surprising. They have been developed from price, quantity, and other data of magnitudes that often differ significantly from those of today. Thus, much work must be done quickly—to estimate supply and demand elasticities that use the relevant variables currently important. The task is made no easier by the swift changes going on in both policy and economic variables. Still another example is the need for analysis related to the rapidly expanding unemployment. No reliable estimates exist of unemployment in rural areas. Also lacking are estimates of

³This report uses the term "practical problems." As Glen Johnson uses it: "problems... which private and/or public decisionmakers cannot avoid..." (12, p. 729).

coefficients of crucial relationships important for considering alternative policies and programs focused on unemployment in rural America.

And despite the progress in quantifying relationships of importance to rural America and the entire food and fiber system, we have depended more than we like to admit on trend analysis and simple comparisons with recorded experience in previous years. So long as change was minimal, the approach served reasonably well. But such an approach will no longer fulfill peoples' expectations that the agricultural economics profession should forecast the nearby and project the future under alternative policy and economic conditions. For example, we need models to evaluate the price, quantity, and income effects of the prospective market conditions for many commodities—grains, cooking oils, and sugar, to name a few. Methods to anticipate the effects on farm workers of the changed economic and policy setting are also needed. Cotton and cattle—dizzying changes there—illustrate the challenges too. Further, rural outmigration has been slowing down, perhaps reversing. But the direction of future changes in rural populations is extremely uncertain. No one knows what the changes in energy prices and the prospective instability of conditions in rural and urban America will do to population patterns.

Of course, adjusting to change isn't new, though the rapidity of adjustment needed today is. Glen Johnson stated in 1971 that the issues of concern to agricultural economists have always shifted over time (12). Organizations as well as issues change. ERS underwent organizational shifts just 2 years ago. Work now falls into two major areas: resource and development economics and food and fiber economics. This switch brings domestic resources and development and related decisions closer to international development work and decisionmaking. The change also ties research and other activities on domestic commercial agriculture more directly to research on international trade of agricultural products.

Overall, this new setup in ERS increases its current productivity, helps allocate resources more effectively, and enhances staff flexibility to meet changes in the future. However, any new setup aids communication in some ways and hinders it in others. Special efforts are sometimes needed. For example, it is important that questions on commercial agriculture are not ignored when doing research focused on natural resources, communities, and rural people. The reverse is also true; equity questions must be raised in research on commercial agriculture.

In meeting the challenge to keep up, concepts of education and training are likely to be severely tested. Mid-career opportunities and experiences in which people learn new skills and prepare for new activities must become more common. People will move from one type of work to another within individual disciplines and, in some cases, from one discipline to another. Should these new approaches to education and training not develop, the alternative will be high rates of obsolescence and research irrelevant to current and prospective problems.

Research approaches used will be somewhat different in the future too. The multiple-objective concepts recently included in water resource planning, for example, will likely be an increasingly important feature of our analyses. Disagreement among rural people in various areas—use of land, for one—will be increasingly prominent. To further complicate one's approach, equity considerations will increasingly favor rural and urban groups over commercial farmers.

There will remain a need for some research by individuals, but future research techniques will emphasize multifield and multidisciplinary work more. In ERS, we have increasingly found that the scope of problems to consider, especially those involving both direct and indirect relationships, dictates teamwork rather than single research efforts. Often, individual researchers lack the needed skills, experience, and time to produce up-to-date research that incorporates material from many disciplines and fields.

As part of ERS organizational changes, staff people belong to program areas and work on team projects even though all members of a team may not work in the same city. For example, one project focuses on the effects of mechanization of tobacco harvesting. Some of the people on this project work in Washington, D.C.; others are at different locations throughout the country. Further, for this particular effort, individuals from both the Food and Fiber group and the Resources and Development group are heavily involved. ERS has taken this approach because a diversity of skills and expertise is needed to address the important issues raised by the subject.

Saying that multifield and multidiscipline efforts will be used more in the future implies more team efforts with people in other agencies of the Federal Government and in the universities. ERS has made some progress—much more is needed. The river basin planning assistance program is one way we have confronted practical problems by joining economic expertise with other disciplines. In other efforts, ERS staff members have joined the Cooperative State Research Service in reviewing projects of the land-grant colleges and universities. University personnel have also joined our staff in reviewing selected research projects and in planning work.

There is no answer to questions about cooperation between ERS and universities. We look forward to identifying a larger number of instances in which ERS and the universities share interest in the same real world problems and where combined and coordinated resources could be effectively focused on these problems.

The research of the next 25 years will also carry a strong streak of practicality. The ERS staff feels an obligation to work on major national issues that private and public decisionmakers cannot avoid. To do such work requires flexibility, effective dialog among researchers and administrators, and joint decisions as to what work will or won't be done. We can't afford the ineffectiveness of administrators who handle all decisions regarding priorities and who overlook the innovative ideas and work of individuals. Neither can ERS afford the luxury of individual researchers who choose and pursue interests that do not coincide with those jointly decided upon. But on

occasion these joint decisions will and should call for research efforts by one person in which objectives are broad and perhaps un-specific. The balance is extremely important; an appropriate one will be found only by trial and error. Intrinsic to an approach which copes with changing problems through joint decisionmaking is the need for evaluation of research efforts and analysis of priorities in a national framework. Only thus can planned change be carried out rather than unrestrained change dictated by reactions to past events.

The response of the ERS staff to this approach has been outstanding. It is clear that all staff members want to be involved in work that many people consider important. Further, each person wants his or her opinions on priorities considered and the opportunity to demonstrate the ability to meet priority needs once they are chosen.

What about the type of skills important in the future? Increasingly, the need exists to avoid the false dichotomy of skills used in economic work related to U. S. problems and those used to work on problems of foreign countries or concerns that are international in context. ERS economists are more frequently getting involved in both types of work. The objectives of such involvement are twofold: greater flexibility in carrying out domestic and international work and increased professional development of researchers. Yet, some division of labor and specialization will continue to be important too.

One of the most significant needs in international development work is analysis which will help policymakers of lower income countries (LIC) choose among differing ways to organize resources to meet their peoples' needs. Such analysis is admittedly difficult, and in some cases sensitive. Potential payoffs to the LIC's are, however, very large. Nor must one overlook that the research and techniques developed for small, low-income farmers in the developing countries may well be applicable to some of their counterparts in the United States. Conversely, research and technology developed for American small, low-income farmers at some of the 1890 land-grant institutions, for example, could be adaptable to overseas problems.

In summary, the need to anticipate the important issues is great. Important, too, is the need for flexibility—in ourselves, the discipline, the institutions, the allocation of funds—to enable agricultural economists to tackle the practical problems of today and those of the coming years. To a large extent these are obvious and simple needs. But that does not make them any easier to fulfill or less necessary. For, Emerson's challenge to the Phi Beta Kappa's 140 years ago speaks today.

Will we know what to do?

Will we as individuals and organizations know the meaningful issues on the horizon?

Will we know how to effectively link the outstanding skills of research and managers so that we and our organizations are flexible enough to work on the important problems—the ones public and private decisionmakers cannot avoid?

Will we know how to bring this flexibility about?

Will we participate in team efforts involving other disciplines, fields, and institutions?

Will we obtain the training and experiences essential to fulfill the fundamental purposes of our profession?

If the answers are positive, then this decade, as Bawden suggested for the 1960's, will in fact be a decade of awakening. The agricultural economics profession will provide research useful to people of rural America in a manner unknown to date.

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